REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Office Action mailed December 20, 2004 (hereinafter "Office Action"). In particular, Applicant appreciates the indication that Claims 2-16, 18-20, 22-24, 27-28, 30-32, and 34-35 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. However, Applicant respectfully traverses the rejections of all of the pending claims and requests reconsideration and withdrawal of the rejections for at least the reasons discussed below.

Claims 1, 17, 21, 25, 26, 29, 33 and 36 Are Patentable Over Moon

Claims 1, 21, 25-26, 29, 33, and 36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,671,266 to Moon et al. ("Moon"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as being obvious in view of Moon. Applicant respectfully traverses these rejections.

Independent Claim 1 recites:

> A method of transmitting comprising:
> ***generating an interference-compensated information symbol*** from a source information symbol ***based on knowledge of an information symbol and a first code*** used to generate a first coded signal; and
> ***concurrently transmitting*** the first coded signal and a second coded signal representing the interference-compensated information symbol encoded according to a second code.

As further described in the present specification, "compensation for interference in a second coded signal arising from a first, concurrently transmitted coded signal may be achieved by generating the second coded signal from an interference-compensated information symbol that is generated based on knowledge of the code and information symbol used to generate the first coded signal." Specification, Page 5, lines 20-24. In other words, knowledge of the first coded signal (which corresponds to the information symbol) is used to generate the second coded signal which is transmitted concurrently with the first coded signal. Thus, the claims recite an *a priori* interference compensation scheme, i.e., a scheme that compensates

for interference *before* transmission of the interferer (the concurrently-transmitted first coded signal).

In contrast, Moon describes an *a posteriori* scheme, where the gain of a channel is adjusted based on information relating to a previously transmitted signal. As stated in the cited portion of Moon, "a controller **19** of **FIG.1** controls the transmission power of the respective channels for the forward link according to an information signal...received from the reverse link, and re-sets the power ratio between the channels upon detecting the change in the power ratio between the channels." Moon, Col. 6, lines 38-45 (*Emphasis added*). As is well-known in the art, a "reverse link" refers to a transmission from a mobile station to a base station. More particularly, as further described in Moon with reference to Figure 2:

> [T]he base station **21** sends the mobile station **25** a channel spread with an orthogonal code (i.e., Walsh channel **23a**) and a channel spread with a quasi-orthogonal code (i.e., quasi-orthogonal code channel **23b**). Upon receiving the channel signals, the mobile station **25** then estimates the SIRs for the respective channel signals received from the base station **21**, and sends to the base station **21** the power control command **27a** for the Walsh channel and the power control command **27b** for the quasi-orthogonal channel according to the estimated SIRs.

Moon, Col. 5, lines 18-28 (*Emphasis added*). Thus, the transmission power in Moon appears to be adjusted based on information signals (power control commands **27a** and **27b**) from a mobile terminal responsive to previously transmitted signals from the base station. Accordingly, Applicant submits that Moon does not disclose or suggest "generating an interference compensated information symbol...based on knowledge of an information symbol...used to generate a first coded signal", and "concurrently transmitting the first coded signal and a second coded signal", as recited by Claim 1.

Furthermore, Moon does not disclose or suggest generating an interference-compensated symbol "based on knowledge of...a first code used to generate a first coded signal", as recited by Claim 1. As shown in Figure 1 of Moon, a first code (orthogonal code WALSH CODE) supplied at the first spreader **15** is used to generate a first coded signal from input signal DATA1, and a second code (quasi-orthogonal code QOF) supplied at the second spreader **16** is used to generate a second coded signal from input signal DATA2. *See* Moon, Figure 1. The Office Action appears to

imply that the second coded signal of Moon represents an interference-compensated symbol because the "base station compensates [for] interference...by increasing/decreasing power of the quasi-orthogonal channel", i.e., the channel used to transmit the second coded signal. Office Action, Page 3. However, as shown in Figure 1 of Moon, the second coded signal does not appear to be generated based on knowledge of the first code WALSH CODE used to generate the first coded signal. As such, the second coded signal of Moon does not represent an interference-compensated information symbol according to Claim 1, as the interference-compensated information symbol of Claim 1 is generated "based on knowledge of...a first code used to generate a first coded signal". Accordingly, Applicant submits that Moon does not appear to disclose or suggest "generating an interference-compensated symbol...based on ...a first code used to generate a first coded signal" and "a second coded signal representing the interference-compensated information symbol", as recited by Claim 1.

Applicant therefore submits that Moon fails to disclose or suggest all of the recitations of Claim 1. For at least this reason, Applicant submits that Claim 1 is patentable over Moon. Claims 21, 29, and 33 respectively recite system, means for, and base station recitations corresponding to the method of Claim 1, and are therefore also patentable for at least reasons similar to those described above.

Claim 17 contains method recitations corresponding to the method of Claim 1 for use in a wireless communications system. The Office Action asserts that Moon discloses all of the recitations of Claim 17 with the exception of a first and second group of orthogonal codes, which, according to the Office Action, is well known to a person of ordinary skill in the art. *See* Office Action, Pages 6-7. However, as Moon does not disclose or suggest many of the recitations of Claim 17, as discussed above with reference to Claim 1, Applicant submits that Claim 17 is patentable over Moon for at least reasons similar to those described above.

CONCLUSION

In light of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejections of the claims. Applicant further submits that the claims are in condition for allowance, which is respectfully requested. Applicant encourages the Examiner to contact the undersigned by telephone to address any remaining issues.

Respectfully submitted,

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Rohan G. Sabapathypillai
Attorney for Applicant
Registration No. 51,074

USPTO Customer No. 20792
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401